Mr. Ross

The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXIX | January 15, 1951 | NUMBER 14

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LEHNERT AND LANDROCK

SHIPS OF THE DESERT LIE BECALMED ON THE BILLOWING SANDS OF THE SAHARA

Bedouins, crossing the world's largest desert (Bulletin No. 3), rest in the shade of their camels. While traveling, they are protected from the sun and flying sand by the carpetlike coverings of their perches atop the animals. The best mounts come from the herds of interior towns where water is scarce. Camels raised along the coast become accustomed to water and need a drink every two or three days, but those of the deep Sahara can go much longer without water.

Bulletin No. 1, January 15, 1951

Uruguay—Progressive South American Land

THE recent election in Uruguay smashingly defeated the communists in a South American country noted for social advancement and democracy.

Wedged between giant Brazil and big Argentina, Uruguay seems small. But its 72,172 square miles make it considerably larger than New England. Its estimated (1947) two and a half million people give it South America's densest population.

Terrain of Argentina and Brazil Repeated in Uruguay

Uruguay is nearly surrounded by water. The Atlantic washes the southeast coast. To the south stretches the estuary of the Río de la Plata (Plate River). On the west, the Uruguay River divides the country from Argentina. Two rivers and a lake form much of the border with Brazil.

Southern Uruguay's rolling grasslands resemble the Argentine *pampas*. The northern ridges and valleys resemble its northern neighbor, Brazil.

Uruguay's chief business is livestock. About 80 per cent of the land is given over to grazing. Recent figures report nearly 9,000,000 head of cattle. Canned, frozen, and "jerked" beef is exported by thousands of tons. Meat-processing plants employ thousands of Uruguayans.

Important as is the cattle industry, wool from more than 20,000,000 sheep is Uruguay's most profitable export. The United States buys more than half. Other customers include Belgium, Italy, Canada, and Bolivia.

Uruguay grows wheat for home use and export. Flax, raised for linseed oil, is an important crop, as are corn, potatoes, beans, and alfalfa.

Beach Resorts Rim Atlantic Shores

Diaz de Solís discovered the Río de la Plata in 1516, but Uruguay was left to its Charrúa aborigines long after Buenos Aires, across the estuary, had become a city. The Charrúa Indians were a fierce and warlike tribe and defended their land almost literally to the last drop of their blood. Today there is not a pureblooded Indian in the country. Most Uruguayans are of Italian or Spanish stock.

Many Argentines ferry—or fly—across the Plata to summer on Uruguay's beautiful rim of beaches. From Montevideo (illustration, inside cover) east to the Atlantic and north to Brazil, one beach after another charms travelers with waving palms and lines of foaming surf. Modern resort hotels, seaside cottages, and casinos enliven the white sands.

The eastern shore of the Uruguay River, known as the Banda Oriental, long was a bone of contention between Spain and Portugal. Spain settled Argentina, and Portugal, Brazil. Each country considered Uruguay an extension of its own colony. The "in-between land" changed hands frequently, sometimes with bloodshed. When the two colonies became independent nations, the fight went on. In 1828, Argentina and Brazil gave up their claims to Uruguay. A constitution was adopted in 1830, and the República Oriental del Uruguay (Eastern Republic of the Uruguay) was born.

For nearly 80 years internal strife retarded development. Not until

ENTERED AS SECOND-CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER THE ACT OF MARCH 3, 1879.
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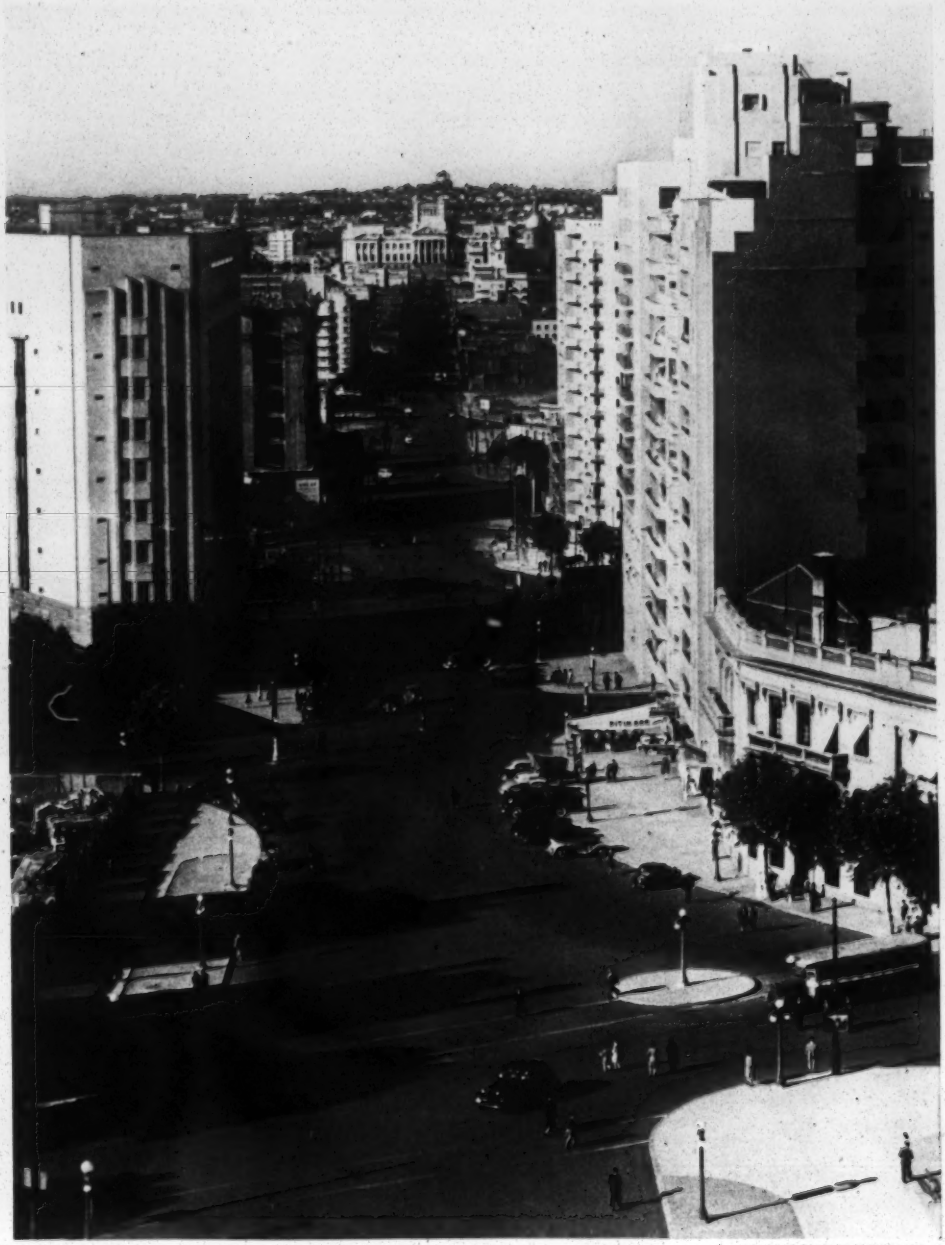
UMI



URUGUAY TOURIST COMMISSION

THOUGH MONTEVIDEO IS 225 YEARS OLD, MUCH OF IT LOOKS AS IF BUILT YESTERDAY

From native quarries came 45 varieties of gleaming marble for Uruguay's capitol, the structure at the end of the street. Buildings of mid-20th-century design line the approach. Early poverty accounts for lack of impressive colonial buildings. Montevideo's first settlers, seven families from Buenos Aires and 20 from the Canary Islands, got free transport, land, and cattle from the Spanish government. Rival Portugal also had a hand in colonizing Uruguay (Bulletin No. 1).

Bulletin No. 2, January 15, 1951

1950 Was Big Year for Exploration

POLAR ice, tropical jungles, tallest mountains, ocean depths, the stratosphere, and interstellar space in 1950 yielded nuggets of new knowledge to widely deployed armies of explorers with boundless curiosity. Science looked at everything between today's living world and fossils of creatures that lived in Alaska perhaps 300 million years ago.

A Canadian geologist found a lake-filled depression two and one half miles wide in the solid granite of northernmost Quebec. It is a meteorite crater gouged out perhaps 4,000 years ago by a shooting star weighing millions of tons which struck with the force of 10,000 atom bombs.

New Jersey Ground Sloth

Primitive tools taken from sites in northwestern Alaska were expected to add proof that North America's first human inhabitants came to Alaska from Siberia. Aleutian mound culture was dated as 4,000 years old, and wood spear shafts unearthed near Lovelock, Nevada, as 7,000 years old. New Mexico rocks yielded bones of lemurs, monkey ancestors that lived 60 million years ago. Wyoming produced the jawbone of an almost-equally old shrew, perhaps the smallest mammal known to history. New Jersey road excavation brought to light a 10,000-year-old giant ground sloth.

The National Geographic Society-Bartol Research Foundation cosmic-ray project in its fifth year probed for the source of the mysterious particles by sending instruments 20 miles above Fort Churchill on Hudson Bay, Canada.

In South America, wild Indian tribes of the Amazon River basin had their privacy invaded in 1950. A Smithsonian Institution ethnologist, returning from four years in Brazil's Mato Grosso, reported contacts with the shy Nambiguara and Terena tribes, never before seen by white men.

A New York University group on the Aegean island of Samothrace dug up the right hand and one finger of the renowned Winged Victory statue unearthed there in 1863.

New Finds in Old Iraq

Anapurna, a 26,492-foot mountain high in the Himalayas, was conquered in June by a French team—the highest peak ever climbed, though not the greatest climbing height man has attained.

Iraqi, in their homeland nursery of Western civilization, unearthed a 4,000-year-old tablet that indicated the Sumerians had developed geometry 17 centuries before Euclid. Harvard's Peabody Museum group in Iraq found crude cave implements believed relics of men far predating the Stone Age. Americans at Nippur found 700 clay tablets, a library of Sumerian law and literature.

At St. Catherine's Monastery, high on Egypt's Mt. Sinai, nearly 1,500,000 pages of records from ancient volumes and Biblical manuscripts were microfilmed for the use of scholars around the world as a project of the United States Library of Congress and the American Federation for the Study of Man.

UMI

1911 did Uruguay begin the advance that has brought it to the fore among South American nations. Now the country has an eight-hour day, health insurance, a secret ballot, and free education through college.

Uruguay is a haven for political refugees. Numerous similarities have won it the name "Switzerland of South America." Like Europe's long-time war-free refuge, Uruguay is a small, compact country with a democratic spirit, sturdy and self-respecting, and with a thrifty and hospitable inclination to welcome tourists to its shores for relaxation and amusement.

Montevideo, capital and commercial center, has nearly a million people, about a third of Uruguay's population. Paysandú, at the head of deep-water navigation on the Uruguay, has about 40,000.

NOTE: Uruguay is shown on the Society's map of South America.

For additional information, see "The Purple Land of Uruguay," in the *National Geographic Magazine* for November, 1948*.

DRAWN BY H. E. EASTWOOD AND IRVIN E. ALLEMAN

WITHIN URUGUAY'S TRIANGULAR BORDERS, SPANNING FIVE DEGREES OF LATITUDE, THE NETHERLANDS, BELGIUM, DENMARK, AND SWITZERLAND COULD BE SET, WITH PLENTY OF ROOM TO SPARE

Bulletin No. 3, January 15, 1951

Deserts Form Dry Belt Around Third of Earth

(Reprinted by popular request from the November 29, 1948, issue)

DESERTS are areas supporting little if any vegetation, animal life, and human population. Generally they are caused by one of two climatic factors: too little rain, or too much cold. Cold deserts are the tundras of Siberia and Alaska and the frigid wastes of polar areas. The dry variety, the only type popularly considered as deserts, spread more widely over the globe. Every continent but Europe has them. (See the Society's World Map.)

One almost continuous band of deserts forms a belt of varying width and dryness reaching more than one-third of the distance around the globe. Beginning at Africa's Atlantic coast, it extends east to the Red Sea, then gradually northeast through Asia almost to the Pacific. Several named deserts make up regional portions of this vast aridity.

SAHARA (illustration, cover): The name of the world's largest desert means desert in Arabic. As is generally true of deserts, the Sahara's boundaries are not clearly defined, and conventional or arbitrary limits are often disputed. But the Sahara, in the broadest sense, is estimated at no less than 3,500,000 square miles. Thus it is somewhat larger than the United States. It stretches all the way across north Africa, interrupted only by occasional oases and by the green ribbon of the Nile. The Sahara covers almost one-half of the African continent. Countries and colonies all or partly within it are: Morocco, Algeria, Tunisia, Libia, Egypt, Anglo-Egyptian Sudan, French Equatorial Africa, French West Africa, and Rio de Oro.

The Sahara is not a uniform plain of hot, shifting sand dunes. An interior plateau of rocks and mountains rises to 11,201 feet in the Tibesti upland near the border of French Equatorial Africa and Libia. All areas get some rain, usually in sudden downpours. Sometimes light rain evaporates before reaching the ground. The core of the western Sahara and the section called the Libian Desert are the driest. Even there oases are not uncommon. An oasis is simply a place where water is available; most of the desert would be fertile if it could be watered.

Temperatures reach 120 and 130 during the day, but nights are chilly. Frost and snow fall on high areas in winter. The Sahara supports large number of Arabs, Moors, Berbers, Tuaregs, Bedouins, Negroes, and Jews.

ARABIAN: Often considered an eastern extension of the Sahara, the Arabian Desert has more rain, more oases, and denser population. Its 1,000,000 square miles support an estimated 10,000,000 inhabitants. There is not a single true river. Countries covered all or in part by the Arabian Desert are Saudi Arabia, Yemen, Aden Protectorate, and Oman. The Rub Al Khali (the empty quarter) has the most extreme desolation in the peninsula, while west of it Yemen is the most favored part. Its mountains catch enough rain to water crops. Mocha coffee developed there. The Persian Gulf coast of the Arabian Desert is rich in oil.

SYRIAN: This northern continuation of the Arabian Desert covers about 300,000 square miles. It stretches from the Dead Sea to the Euphrates River and reaches as far north as Aleppo. Syria, Jordan, Saudi Arabia, and Iraq are the countries containing it.

KARA KUM: Fingers of desert reach across Iraq, Iran, and Afghanistan

UMI

A hundred feet under a native village on the east bank of the Nile, Egypt's Department of Antiquities discovered and identified the fabled 3,500-year-old, two-mile-long Avenue of the Sphinxes, connecting the famous temples of Luxor and Karnak (illustration, below) and once trod by Cleopatra.

Frenchmen studied the Greenland icecap, making the first east-west crossing by motor (snow tractor), and leaving nine of their number to study weather through the winter. Commander Donald B. MacMillan made his 29th Arctic visit, taking Mrs. MacMillan and a crew of scientists and students to gather Arctic plant and animal specimens for American schools.

A United States Navy-University of California survey crew reported a mid-Pacific mountain range extending from Wake Island 1,000 miles northeastward toward Hawaii, 100 miles wide at places, and having submerged peaks up to 14,000 feet high.

In July, the National Geographic Society and the University of Miami initiated research on plankton, microscopic life on which all ocean fishes feed, in and near the Gulf Stream off Florida's east coast.

The National Geographic Society-Palomar Observatory Sky Survey discovered two dwarf galaxies previously unrecorded.

A. W. CUTLER

THROUGH 30 CENTURIES OF FLOOD AND DROUGHT, KARNAK'S COLUMNS HAVE WATCHED THE NILE

Three of Egypt's pharaohs—father, son, and grandson: Rameses I, Seti I, and Rameses II—built the hall of colossal pillars of the Temple of Amun at El Karnak, northern part of the ruins of Thebes, ancient Egypt's capital. Called the "Hypostyle Hall" from an architectural term meaning a roof supported on pillars, it has been described as "the most magnificent hall of pillars . . . ever seen in Egypt or elsewhere." Inscriptions on the columns telling of important events in the lives of the rulers still retain some of the bright colors in which they were painted.

Bulletin No. 4, January 15, 1951

Plenty of Honey, Not Enough Bees

THERE is plenty of honey in the United States today. But there are far too few honeybees. This paradox has arisen with the increasing development of the land.

Commercial honey production by the more than 5,000,000 man-managed honeybee colonies in 1950 totaled about 234,000,000 pounds—somewhat more than the stepped-up average production of World War II years and five per cent more than the 1949 yield.

Bees Pollinate Flowering Plants

Every state, however, would welcome a few million more honeybees. For nature's balance has been changing steadily since the machine age came to farming. Honeybees, valued for centuries as the chief source of sweetness, still mean profits in honey and beeswax for hundreds of thousands of beekeepers (illustration, next page). But they are far more important as pollinating agents. They carry pollen, the tiny yellow grains seen inside flowers, from blossom to blossom. This insures fertilization and formation of new seeds and is of utmost importance in all flowering crops.

In the early stages of American farming, bumblebees, wild bees, and gentle breezes took care of pollination to the satisfaction of all. But natural refuges of these pollinators were destroyed in the march of clearing forests, prairies, and swamps, and planting orchards, gardens, and vast fields of grain.

The trend to huge acreages in single plants enabled insect pests to prosper and multiply. More recently, powerful insecticides have been making inroads on the pollinators as well as on the enemies of farm crops.

The honeybee, by far the most efficient at it, now does five-sixths of America's big pollinating job. It cares for virtually all fruit and flower blossoms, for clover, alfalfa, and other livestock-supporting plants. A bee shortage means lowered production even in the most fertile areas. Red clover when well pollinated, for example, will yield ten times the present national average production of its seed.

20 Million Bees for Rent

Fruit orchardists, recognizing this principle, have for many years rented honeybee colonies for their blossom seasons. Investing $5 or more per hive, they come out far ahead on the deal. Hives are plugged at night when the bees are within, and trucked to the orchard locations.

A Maryland beekeeper, for example, will take a big truckload of hives to Florida for the late winter orange blossom season. Returning to the Appalachian fruit country, he will put his bees to work for apple and peach orchardists. In Washington County, Maryland, alone, more than 20,000,000 rented bees were on the job through the eight- to ten-day appleblossom season.

Strange seems the fact that the honeybee is not an American native. It followed colonial migration to every part of the United States and Canada.

UMI

to the arid plain of the Kara Kum (black sands) which covers nearly all of the Turkmen S.S.R. of the Soviet Union. This desert reaches from the Caspian Sea east to the Amu Darya (river). It covers 100,000 square miles.

KYZYL KUM: This desert adjoins the Kara Kum and extends east and north to the Syr Darya and the Aral Sea. It is about 370 by 220 miles in extent. It covers much of the Uzbek S.S.R. and the southern edge of the Kazakh S.S.R. Some of the most populous, productive, and historic oases in the world—Bukhara, Merv, Samarkand, and Tashkent—lie along its rivers and southern mountain valleys.

In southern Kazakhstan and northern Sinkiang lie three deserts of diminishing size which form the connecting link between the central Asia deserts and the great Gobi. These deserts are: The Peski Muyun Kum and the Peski Ishik Otrau, both in the Kazakh S.S.R., and the Peski Dzosotin Elisun or Peski Kobbe in Chinese Sinkiang. Peski means sand.

GOBI: Gobi means desert in Mongolian. The Gobi proper is estimated at 300,000 square miles, the size of two Montanas. It is sparsely settled by nomad Mongols who graze cattle and sheep on the few areas of grassland. The Gobi lies about a half mile above sea level, covering parts of Inner Mongolia and Outer Mongolia and a bit of China and Manchuria.

In the widest use of the term, the Gobi stretches much farther—from the Pamirs of central Asia to the Khingan Mountains of Manchuria—2,300 miles east and west and 600 miles north and south.

TAKLA MAKAN: This completely uninhabitable basin of the Tarim River is often considered a southwest extension of the Gobi. It covers most of the south part of Chinese Sinkiang. It measures 650 by 250 miles.

In addition to the deserts of the world's great dry belt, there are many isolated examples. The Thar or Indian Desert covers 200,000 square miles in the northwest part of the Indian Peninsula. Australian deserts stretch north and south from coast to coast in west-central Australia. The Kalahari covers 240,000 square miles in southern Africa. The Atacama, north Chile's desert, is one of the richest and possibly the driest.

The "Great American Desert" of early imaginative geographers is now confined to the 25,000 square miles of the Mojave Desert in southern California. Death Valley is a northern finger of the Mojave, and other arid and semiarid portions of the Southwest and Mexico connect with it.

W. BOSSHARD

FEW DESERTS CAN MATCH THE COMPLETE DESOLATION OF SINKIANG'S TAKLA MAKAN

Reopened Lead Mines Add to Turkey's Wealth

GHOSTS are stirring in the ancient lead mines of Turkey. The old Bolkardag diggings, near the Mediterranean port of Mersin, are again in operation, with the possibility looming for still further revival of the industry through the assistance of Uncle Sam's Marshall Plan.

Although Turkey is not one of today's big lead producers, its Bolkardag mine was yielding this metal nearly 1,400 years ago. Some time in the dim past the diggings were abandoned, and it was not until 1820 that the mine was reopened, this time for silver production.

Mines Worked in A.D. 600

Bolkardag was worked for silver until about 1890. Then once more it sank into oblivion until engineers of the late 1940's began tapping the old field for much-needed lead. It was during these recent investigations that the date of the mine's earliest activity was established, following exploratory excavations which turned up shovels and other tools attributed to A.D. 600.

Modern Turkey's lead output has varied considerably. Up to World War II, the country produced some 12,000 to 15,000 tons annually. Then the amount declined to 2,000 or 3,000 tons a year, from which point it began to climb, reaching between 6,000 and 7,000 tons in 1948-49.

Turkey's most important lead operation was formerly at northwest Balya, between the inland city of Balikesir and the Dardanelles Strait, where extensive deposits were worked by French interests. The mines were closed down, however, some time ago, because of high costs and transportation problems.

At present, the government's Eti Bank, the agency responsible for developing Turkey's mineral resources, is pushing two lead projects—the Bolkardag mine, and the Keban mine, the latter in the east central part of the country. In 1948 new processing and power plants were completed at Keban.

Protects Against Atomic Radiation

Turkey is far down on the list of contributors to today's international lead market. The United States leads the world in both production and consumption of this metal of many uses—not the least of which is its atomic-age application as a protective material against harmful radiation. United States annual output amounts to nearly 400,000 tons.

Together with the United States, three other countries—Mexico, Australia, and Canada—have accounted for about three-fourths of the world's total lead supply in recent years. Russia is believed to have recovered some 75,000 tons in 1948. Other important producers include Belgium, West Germany, France, Peru, and Spain. Spain, now outdistanced by many other nations, for centuries was the number-one lead contributor.

The current increase in Turkish lead output is expected to go into modern home industry, thus avoiding the necessity of importing high-cost lead, and saving foreign exchange for other purposes.

UMI

Indians called it the "white man's fly." Colonies are now so thoroughly spread throughout the world that honey and beeswax have a wider geographical range than any other farm crop.

Bees aid the short garden season in Alaska. Soviet farmers are reported working on a frostproof variety to live with their northern fruit crops. France's Rhone Valley farmers imported Alabama queen bees to rebuild colonies destroyed in war years. British beekeepers find American queens more productive though shorter-lived than their own.

NOTE: For additional information, see "Man's Winged Ally, the Busy Honeybee" and "In Field and Hive with the Busy Honeybee" (16 paintings), in the *National Geographic Magazine* for April, 1935.

U. S. DEPARTMENT OF AGRICULTURE

THE MODERN TREND IN ARCHITECTURE APPEARS IN THIS BEEHIVE UP FOR INSPECTION BY A HOUSE-HUNTING SWARM

An "efficiency apartment" of modern design is alluring bait for a swarm of bees searching for a new home. When the rapidly multiplying population overcrowds the hive, the queen and all her court old enough to fly leave their old quarters. They take to the great open spaces in a buzzing cloud which settles on a handy tree or fence post, apparently while deciding what move to make next. Scout bees go house hunting. When they find a desirable house they herd the swarm into it. An enterprising apiarist has placed this hive in a location so convenient that the bees cannot resist it, and thus he will capture the whole colony of honey makers. Trouser legs are tied at the ankles to protect his legs from the stings of curious and adventurous bees. Bees are reputed to be most amiable around noon. Fortunately for an apiarist out to capture them, the bees usually swarm between ten in the morning and midday.

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In addition to lead—and long more important in Turkey's mineral treasure chest—are its chromium, coal, iron, and copper resources. Turkish chromium, practically all of it exported, is especially noted in world marts. A strategic mineral of immense military and industrial value, it was in demand both by the Germans and the Allies in World War II.

NOTE: Turkey is shown on the Society's maps of Europe and the Near East, and Bible Lands and the Cradle of Western Civilization.

For additional information, see "Peasants of Anatolia," in the *National Geographic Magazine* for July, 1949*; "American Alma Maters in the Near East," August, 1945*; "The Turkish Republic Comes of Age," May, 1945*; "Alert Anatolia" (13 photographs), April, 1944; "On the Turks' Russian Frontier," September, 1941; "Turkey, Where Earthquakes Followed Timur's Trail," March, 1940; and "The Transformation of Turkey," January, 1939*.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, November 21, 1949, "Turkish Coast Visited by U. S. Fleet"; and "New Oil Adds Turkey to 'Black-Gold Lands'," April 12, 1948.

MAYNARD OWEN WILLIAMS

TURKISH FARMERS SHOE AN OX, STILL A SOURCE OF MUCH OF THE WORLD'S PLOW-POWER

Tractors are being used more and more in Turkey under its progressive government. Teachers are sent out to backward areas to demonstrate new equipment and better farming methods. Along with modern agriculture, the young Turks in such schools keep alive their handicrafts, traditional songs, and folk dances.

TEACHERS! Do you leaf aimlessly through your *National Geographic Magazines*, looking for that article on Greece, those color pictures of Guatemalan costumes? Save time. Order the Cumulative Index, 1899-1949 inclusive. $2.50.